

09/881,087

2- (Previously amended) A composite product comprised of a layer of polystyrene structural plastic having a 0.1 to about 2.5 mm thin protective layer of a blend of an acrylic ester polymer and acrylic polymeric additive.

B 3- (previously amended) A process for producing a composite of a polystyrene structural plastic and a 0.1 to about 2.5 mm thin protective layer, the process comprises joining a molten stream of structural plastic and a molten stream of a blend of an acrylic ester polymer and an acrylic polymeric additive in an extruder discharge conduit to form a single stratified stream of molten material conforming to the cross-section of the conduit and having a relatively sharply defined interface between the structural plastic and the blend, and thereafter passing the stratified stream through a sheet-form extrusion die having its die lips generally aligned with the foregoing interface.

4- (Previously amended) An acrylic resin capstock composition comprised of:

- a) 10 - 95% polymethyl methacrylate or an  $C_1-C_6$  alkyl methacrylate/ $C_1-C_8$  alkyl acrylate copolymer matrix
- b) 0 - 60% modifiers; and
- c) 5 - 40 % acrylic polymer additive which is comprised of
  - 5 - 90 % methyl methacrylate,
  - 10 - 95%  $C_2-C_6$  alkyl methacrylate and
  - 0 - 15% methacrylic acid, acrylic acid or  $C_1-C_3$  esters thereof.

5- (Original) The capstock composition of Claim 4 wherein the acrylic polymer additive is comprised of 20-80% methyl methacrylate and 20-80% butyl methacrylate and has a molecular weight from 40,000-300,000.

6- (Original) The capstock composition of Claim 5 wherein the acrylic polymer additive is comprised of 50- 80% methyl methacrylate and 20-50% butyl methacrylate and has a molecular weight from 40,000-100,000.

09/881,087

7-

(Previously amended) A co-extruded product comprised of two layers

(a) a first layer comprised of polystyrene structural plastic and

(b) a second layer comprised of

(i) methyl methacrylate resin, and

(ii) an acrylic polymer additive that increases the adhesive strength between the layers.

8-

(Currently amended) The product of Claim 7 wherein the polystyrene structural plastic is a copolymer of acrylonitrile/butadiene/styrene copolymer.

9-

(Previously amended) The product of Claim 7 wherein the polystyrene is high impact polystyrene or crystalline polystyrene.

10- (Original) The product of claim 7 wherein the acrylic polymer additive is a polymer comprised of:

(a) 5-90 wt% methyl methacrylate,

(b) 10-95 wt% C<sub>2</sub>-C<sub>6</sub> alkyl methacrylate, and

(c) 0-15 wt% methacrylic acid, acrylic acid or C<sub>1</sub>-C<sub>5</sub> esters thereof.

11- (Original) The product of claim 10 wherein the acrylic polymer additive is a polymer having monomer units of methyl methacrylate, butyl methacrylate and optionally methacrylic acid.

12- (Original) The product of claim 11 wherein ratio of the monomer units is (a) 20 to 80 wt% methyl methacrylate,

(b) 20 to 80 wt% butyl methacrylate and

(c) 0 to 10 wt% methacrylic acid.

09/881,087

B<sup>1</sup>  
13- (Original) The product of claim 12 wherein ratio of the monomer units is (a) 50 to 80 wt% methyl methacrylate,

(b) 20 to 50 wt% butyl methacrylate and

(c) 0 to 10 wt% methacrylic acid.

14- (Original) The product of Claim 7 wherein the second layer is comprised of

(i) 60 to 95 wt % of methylmethacrylate resin and

(ii) 5 to 40 wt % of the acrylic polymer additive.

15- (Original) The product of Claim 7 wherein the first layer contains pigments, dyes, fillers, PS, acrylic and HIPS rework, different grades of HIPS.

16- (Original) A co-extruded product comprised of two layers

(A) 50 to 95 wt % being a first layer comprised of high impact polystyrene, and

(B) 5 to 50 wt % being a second layer being comprised of

(i) 60 to 95 wt % of an acrylate resin, and

(ii) 5 to 40 wt % of an acrylic polymer additive which is copolymer or terpolymer that increases the adhesive strength between the layers.

17- (Original) The product of Claim 16 wherein the acrylic polymer additive is a 50- 80% methyl methacrylate and 20-50% butyl methacrylate polymer having a molecular weight from 40,000-300,000.

18- (Original) The product of Claim 16 wherein the acrylic polymer additive is a 20-50 % methyl methacrylate and 50-80% butyl methacrylate having a molecular weight from 40,000-300,000, preferably 40,000-100,000.

19- (Currently amended) An A composite acrylic composition product for use as a capstock in sanitary applications, appliance housings, appliance liners, appliance doors, building doors,

09/881,087

*B1  
cond*  
window trim, shutters, automotive parts or farm equipment ~~comprised of a~~ wherein said  
composite of comprises a polystyrene structural plastic and acrylic composition capstock, the  
composite formed by feedblock coextrusion, wherein the acrylic composition is comprised of a  
blend of an acrylic ester polymer and acrylic polymeric additive.

---